

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of producing a biomaterial measuring device that uses an electrochemical assay, comprising:

forming at least two first electrodes on a first side of a plurality of reaction elements, to which an assay reagent is applied, on a first substrate,

forming a second electrode on a second side of the first substrate, wherein the second electrode transmits an electrical signal to a measuring device,

forming a via hole through the first substrate,

electrically connecting, through the via hole, the first electrodes on the first side of the first substrate to the second electrode on the second side of the first substrate,

applying an assay reagent to the first electrodes on the first side of the first substrate;

cutting the resulting first substrate into a plurality of unit of individual reaction elements,
[[and]]

forming at least one cavity, each with space for a capillary, on one side of a second substrate, and

forming at least one capillary, by attaching the first side of at least one reaction element into at least one of the cavities in the a first substrate piece, which is formed by cutting the resulting first substrate in the unit of individual reaction element, to a predetermined portion of a second substrate;

wherein each having more than one capillary is for feeding a biomaterial therethrough.

2. (Currently Amended) The method as set forth in claim 1, wherein the [[a]] plurality of ~~first substrate pieces, which are formed by cutting the resulting first substrate in the unit of individual reaction elements~~ are [[, is]] attached to the second substrate.

3-8. (Cancelled)

9. (Original) The method as set forth in claim 1, further comprising mounting a dehumidifying agent for removing moisture, which is introduced from an environment to the assay reagent, on a predetermined portion of the biomaterial measuring device while the dehumidifying agent is isolated from the environment.

10. (Cancelled)

11. (Currently Amended) A biomaterial measuring device that uses an electrochemical assay, comprising:

a first reaction element comprising:

a first substrate,

a plurality of first electrodes on a first side of the first substrate,

a second electrode on a second side of the first substrate,

a via hole through the first substrate for electrically connecting the electrodes on the first side of the first substrate to the second electrode on the second side of the first substrate,

~~an assay reagent which is applied to the first electrodes on an entire first side of the first substrate to form a reaction element; and~~

~~a second substrate, on which the first substrate is mounted to form capillaries for introducing a biomaterial therethrough~~ having at least one cavity, each with space for a capillary, on one side of the second substrate, wherein the first side of the reaction element is mounted into one of the at least one cavities in the second substrate, and

a capillary, formed by mounting of the reaction element one of the at least one cavities in the second substrate,

wherein the assay reagent reacts with a biomaterial introduced through the capillary to generate an electrical signal, and

wherein the generated electrical signal is transmitted to a measuring device through the second electrode.

12-14. (Cancelled)

15. (Original) The biomaterial measuring device as set forth in claim 11, wherein the second substrate is made of any one selected from the group consisting of plastic, glass, and semiconductor wafer.

16. (Currently Amended) The biomaterial measuring device as set forth in claim 11, further comprising a second reaction element, wherein the second reaction element comprises:

a first substrate,

a plurality of first electrodes on a first side of the first substrate,

a second electrode on a second side of the first substrate,

a via hole through the first substrate for electrically connecting the electrodes on the first side of the first substrate to the second electrode on the second side of the first substrate,
and

an assay reagent applied to the first electrodes,

wherein the second reaction element substrate is mounted into one of the at least one cavities in the second substrate ~~reaction element includes at least two first electrodes formed on the first side of the first substrate, and the assay reagent is used to measure the biomaterial through an electrochemical assay and is applied throughout the first electrodes.~~

17. (Currently Amended) The biomaterial measuring device as set forth in claim 11, wherein the first substrate is formed of an insulating material ~~16, further comprising a second electrode which is formed on a second side of the first substrate, opposite to the first side, and which is electrically connected to at least one of the first electrodes on the first side.~~

18. (Currently Amended) The biomaterial measuring device as set forth in claim 11 [[17]], wherein the second electrode ~~first electrodes~~ on the second side of the first substrate is formed of an electrical conductive material ~~first side are electrically connected to the second electrode on the second side through a via hole which is formed through the first substrate, a wall of which is coated with a conductor.~~

19. (Original) The biomaterial measuring device as set forth in claim 11, further comprising a dehumidifying agent which is mounted on a predetermined portion of the biomaterial measuring device so that the dehumidifying agent is isolated from an environment and which removes moisture introduced from the environment to the assay reagent.

20. (New) The biomaterial measuring device as set forth in claim 17, wherein the insulating material is one of a printed circuit board, a plastic substrate, a glass substrate, and a semiconductor wafer.